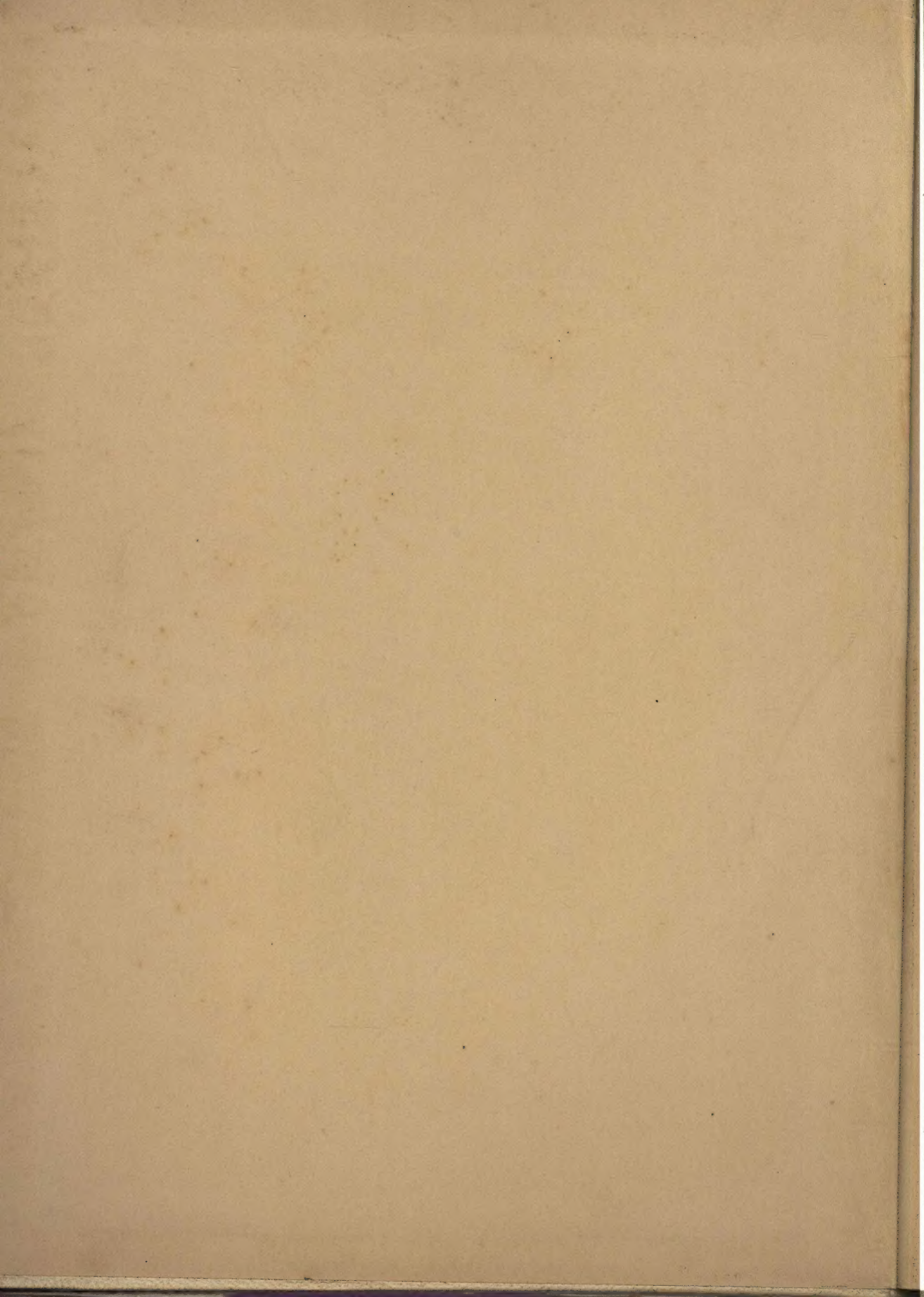


THE
ROMANCE
of
GEORGIA
MARBLE





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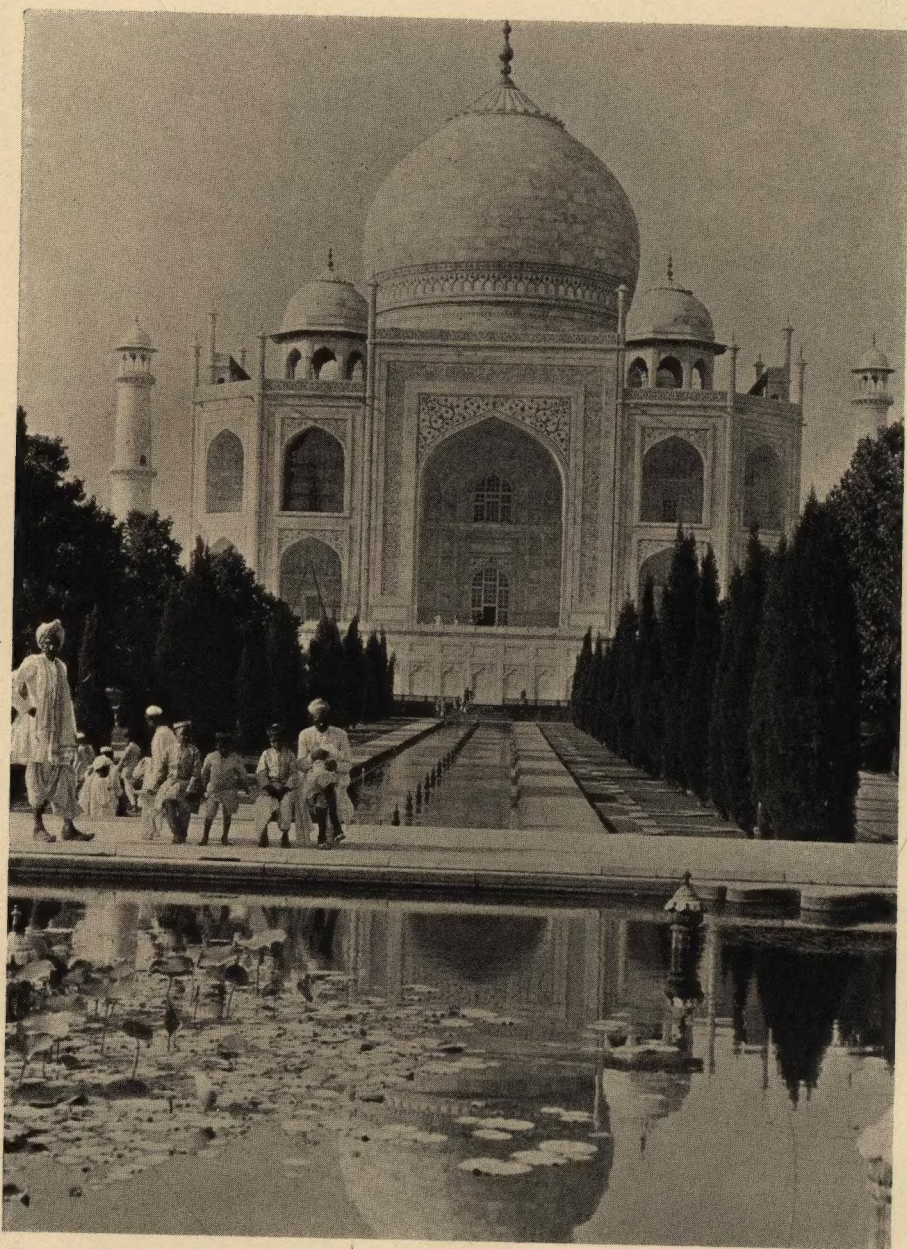
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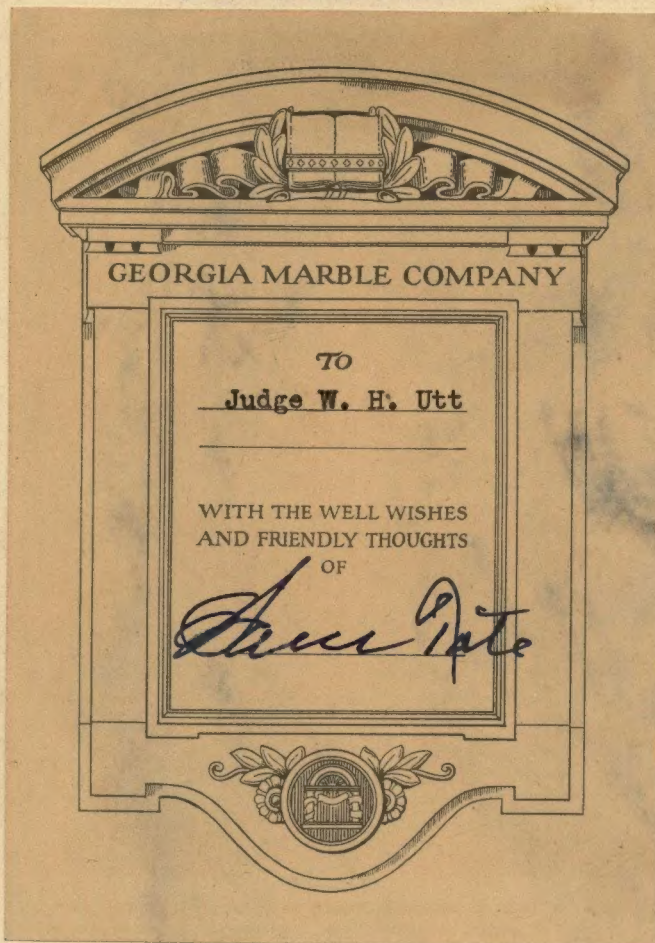
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The Taj Mahal, in Agra, India, the "proud passion of an emperor's love wrought into living stone." The most beautiful structure in all the world. The exterior white marble, said to have come from quarries at Makrana, India, so closely resembles the marble from Georgia that it is impossible to tell them apart.

THE ROMANCE OF GEORGIA MARBLE

by
JEROME G. DANEKER



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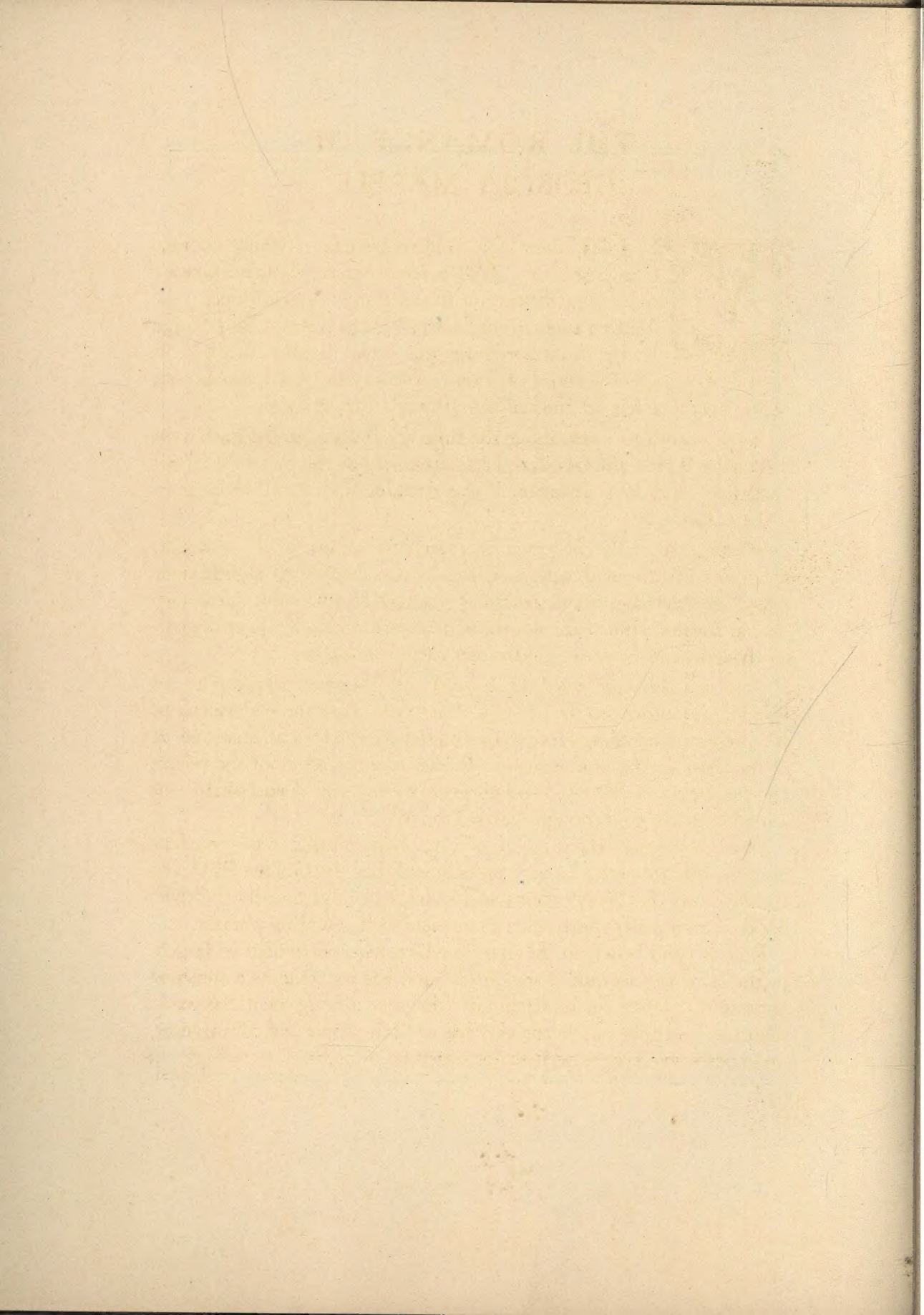
TATE

*AT the foothills of the Blue Ridge
In the Long Swamp Valley fair,
Lies the town of Tate, in Georgia,
With its treasure rich and rare.
Here the centuries in their passing
Worked their wonders 'neath the sod;
Time alone made Georgia marble—
Here the handiwork of God.*

*In this valley Indian tribesmen
Featured early history pages,
Knowing naught of future grandeur
In these miles of "Stone of Ages";
Needing only touch of craftsmen
And the brains of future time,
To create commercial structures,
Rare memorials—shrines sublime.*

*Here a kindly hearted hill-folk
Live at peace devoid of care,
Work in real Arcadian freedom;
All contribute—each his share.
Here sincerity is treasure,
Here the brotherhood of man
Is the touch that makes all, kinsmen
Through a true Utopian plan.*

J. G. D.
1927



THE ROMANCE OF GEORGIA MARBLE



YES, folks, there is a modern Utopia—I know because I have seen it. It's an ideal industrial democracy of today, but it was not founded upon ideals alone. Nestled away in the foothills of the historic Blue Ridge Range, and bordering the Long Swamp Valley, in North Georgia, is the town of Tate. Now Tate is not an unusual name, but Tate has an unusual significance. But let us see.

Many years ago—just about the time the Indians of the East were migrating West—the ancestral Tates, forebears of the present Colonel Sam Tate, laid the foundation of this Arcadian industrial community—Tate, Georgia.

Marble, especially the precious, matchless variety which underlies the miles of hills and valleys in this entire district, is significantly suggestive of magnificent structures, romantic edifices and great memorial shrines. But Tate is a monument within itself, quite distinctively independent of its God-given natural resources.

Tate is a thriving, bustling, happily self-governed community—a peopled monument to the life of Colonel Sam Tate and his associates. It represents something more than a merely idealistic or altruistic effort of the man, or the organization. Rather it is the result of the beliefs and practices—the method and purpose of life itself, if you please—of a man who saw and thought beyond the day.

Here is evidenced the lifework of a man who refused to be precedent bound—the lifework of one who believed that the Golden Rule, the simple every-day implications of Divine teachings and the brotherhood of man really mean more than mere well-sounding phrases.

Rich beyond belief, in the marble which has contributed so largely to the fame of Georgia, Tate “lives” and has its being as a sunshine community, where the leadership of “this man among men” has made manifest its impress upon the very life of both people and community, upon life's objective as well as life's method of today.



A typical scene around Tate, Georgia, in 1888. From an old photograph.

Tate with its limited population—small by comparison with the cities of the State—is situated in the picturesque Long Swamp Valley, where years ago roamed the American Redskins of early history. At first just a mere group of hardy hill-folk, this pure-blooded Anglo-Saxon people fought on through the vicissitudes and misfortunes of early pioneering, guided only by the indomitable courage and foresight of the first Sam Tate.

Lacking knowledge of engineering, machinery, methods of transportation and funds, the struggles through the early ventures in quarrying in this vicinity were prosecuted with the indefatigable spirit of a people possessed of the determined will to do, and the confidence to follow the vision and leadership of him in whom they believed. And this confidence was not unwarranted.

Today, thanks to those who prided themselves on the purity of the Anglo-Saxon blood which coursed through their veins, and to those who have had the courage to follow through, Tate is the center

of a nationally known marble market, and Georgia marble is recognized practically the world over. Not alone in America has this magnificent deposit become permanently famous, but abroad, too, its virtues are readily recognized and appreciated. Here in the States this product quarried from the bowels of the earth, by the descendants of the early settlers in the Tate Valley, is foremost in prominence in our nationally known buildings. It is recognized as a structural necessity, an economical and utilitarian material, and as a medium of ornate and decorative expression.

Difficult it is to measure the far-reaching and ever-expanding influence of this industry throughout the country at large, as well as to the State of Georgia. Capital, labor, money circulation, buying power and the responsibility of human dependency—all have an incalculable bearing on the weave and woof of the industrial fabric of our country. While at Tate, this giant enterprise with its far-reaching and many-sided influences represents the hub of all community endeavor and activity. Commercially and socially—toil, recreation, home life and government—all are supervised, either directly or indirectly, by the company operating the quarrying interests in this great marble belt.

When we see these happy and hardy people living under better housing conditions and enjoying greater advantages than two or three times the cost would purchase elsewhere, we begin to realize the great possibilities that industrial expansion, along properly conceived and logically prosecuted plans, makes available to those dependent alone upon their daily toil for the rewards of effort.

Living conditions at Tate are ideal. For those of modest earning capacity, comfortable homes are provided at a mere fraction of the cost of similar quarters elsewhere. Each little home, no matter how small, has its vegetable garden, and, in most instances, its garage. Seasonal flowers dot and border the front grass plots, and cheery-faced, red-cheeked youngsters romp and play, quite safely removed from the dangers incident to traffic of larger centers of population.

Self-government here is practically a law within itself. Neither lock-up nor jail has a purpose in this community. Churches of many denominations adequately well make their work felt in this non-

sectarian community of God-fearing, clean living and happy-hearted people.

Tate prides itself on many of its community activities, and well it may. An exceptional school system, modern playgrounds, up-to-date athletic fields, well-managed community centers and properly supervised social service work among its own, are all promoted and maintained by the Georgia Marble Company. Decidedly, a higher mental and moral standard than the average city can boast, is evidenced here. This is readily reflected in the better physical and temperamental status of its residents. This applies alike to the manual laborer and the craftsman—the man in the overalls and the man of linen—for here there are no class distinctions, as such.

With this picture still before me, and with first-hand information gained through actual contact with the folks of this unusual and really wonderful township, I sense something more than the great and dominant efforts of a great industry. Something more than the desire to selfishly promote its own well being—something more than the laudable desire to generously share its success with its co-workers must have prompted this distinctively different industrial undertaking to launch and carry on its great program of industrial tolerance and indulgence.

At Nelson and Marietta, too, the influence of the giant plants of the Georgia marble industry is reflected in the life of the general community. Because, while the Georgia Marble Company is not responsible for the government of these townships, the many-sided activities of the Company and its associates is ever reflected in the life and progress of these Georgia cities.

In every possible manner, here those responsible for the industry's management contribute liberally of their time, efforts and funds, to promote the health, happiness and well-being of the residents. Here, also, as at Tate, similar conditions of progress, contentment and purposeful ideals of life maintain.

This condition is largely due to the helpfulness and encouragement of those promoting the interests of the quarries. The officials appreciate the great mutual dividends possible, through their willingness to

advance the individual and collective interests of those they recognize as contributing so largely to the joint success of both the company and its employees.

In all civic efforts, in each of these communities, the quarry interests well recognize their responsibility, as well as the justification, for giving first thought to the well-being of those constituting the corner stone of industrial success.

Once you have lived among these conditions, and with the people of Tate, Nelson, Marietta and the contiguous country, the answer is simple. It's the composite of simple conditions, even though these simple conditions have been many times much involved in the past century. This composite represents a balanced and leavened mental and physical structure of the courage and hardihood of our early North Georgia settlers—the vision of those who followed the initial struggles of the first company efforts—and the dynamic and benevolent inspiration of a man. This man believes he is his brother's keeper—he lives his sermons instead of preaching them—he sees the right




An airplane view of today, showing the marble industry that has developed at Tate.

rather than the wrong and believes that luck is but a synonym for hard work. He shatters precedent by actually sharing the efforts of life with his fellow-man. To the man, Colonel Sam Tate, this tribute means nothing—to those who would know something of the romance of Georgia's marble, the personal reference will mean much.

A CITY'S SKYLINE

VISUALIZING the skyline of a great metropolitan city, we mentally see the irregular horizontal of the outstanding buildings of the metropolis. And from the first glimpse we are vividly and consciously impressed by the matchless beauty, size and stability of the glistening structures of white. Cathedral spires, lofty buildings of commerce, municipal groupings of grandeur, and buildings of State—all mutely bearing testimony to the incomparable adaptability of marble—to life-enduring Georgia marble.

And a moment's reflection is suggestive of the limitless romance of this natural treasure-stone—this stone of the centuries. Back again in the hills of Georgia's miles of marble, beneath the mounts of the Blue Ridge and underlying the Valley of the Swamp, lie the skylines of the future. Here beneath the forest and sod is the court house, the bank, the house of worship and the office building of tomorrow. Just as perfect and complete as if in the finished state, and incorporated in these structures, are the "cubes of time" now dormantly awaiting the touch of man and machinery to mould their future shape—and plan their destiny.



THE ANCIENT BUILDER



EARLY 3,000 years ago, there was begun at Jerusalem, in Israel, a massive building that was to serve as a worthy and permanent place for the Ark of the Covenant. David, the Poet King, had spent the last years of his life working out the plans for the structure and these specifications were carefully followed by Solomon, his son.

Six years were consumed in the erection of that part of Solomon's Temple containing the Holy of Holies and during this time, "there was neither hammer nor axe nor any tool of iron heard." Then followed a period of fifteen years, spent in the building of the entrance way, the private palaces of the King and Queen and the Halls of Justice. These structures had a lesser sanctity; so the rule of silence was broken, and the busy hum of hundreds of workmen was heard around the Temple on Mount Moriah, in the sawing and chiselling of the blocks of soft Malaki marble which were brought from the royal quarries near the Damascus gate.

These blocks were rough hewn, taken on rollers through an underground opening, within the Haram Area, and moved by drag ropes and levers to the site needed, where they were "sawed with saws" (I Kings, VII, 9).

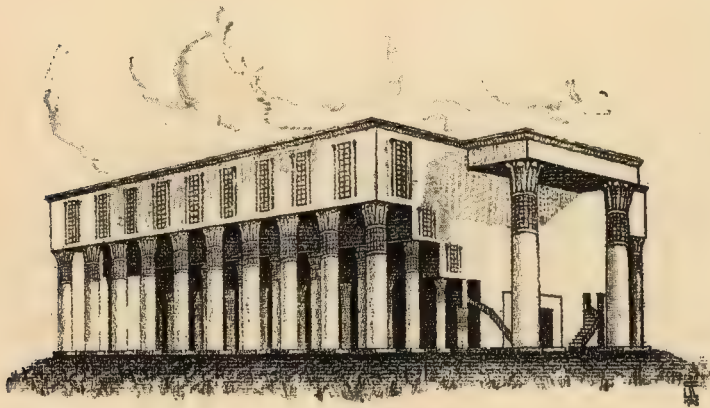
In those days marble was considered a precious stone, and was handled by dealers in gold and silver. Beautiful vessels of marble, onyx and sapphire were offered for sale by these vendors, along with vessels of ivory and fine wood. Marble for building material was regarded as an extravagant luxury. Courts were hung with costly draperies fastened with purple cords to silver rings in the marble columns. Pavements of red, blue, white and black marble were used to distinguish the courts of special honor.

Solomon's Temple was in the form of a tent in wood and stone with a gabled roof. The whole interior, both inner and outer chambers, was overlaid with gold. According to Leyard, there were 8,100 pounds of gold used in the Holy of Holies and 5,700 pounds in the outer hall and porch. The foundation was of huge blocks of Malaki seven and

a half feet thick and from nine to twelve feet long. This Malaki was changed to Mezzeh (or Mizzeh) by the action of the atmosphere, with an accompanying hardening of the texture of the marble. The stone from these Jerusalem quarries varied from a delicate primrose color to a pink or cream, sometimes mottled with pink, or showing rose-pink veins.

Opposite the eastern gate of the Temple enclosure was the magnificent gateway into the forecourt, formed of eighty lofty pillars. Nearby were two houses built for Solomon and his Queen, of costly hewn alabaster or gypsum. Slabs of this lined the rooms and sapphire and onyx and all manner of precious stones were also used as building materials, but always "marble stones in abundance."

A vast amount of labor was expended in the huge undertaking. The workmen were bitterly oppressed, and scant mercy was shown the unfortunate wretch who weakened under the grind. Solomon had no conception of the true ethics of employment and the result was seen when, at his death, his subjects complained of his "grievous service and heavy yoke." The treatment accorded the people was the immediate cause of the disruption of his kingdom.



NATURE AT WORK



LONG before Solomon's time, even millions of years ago, certain forces were at work beneath the surface of the earth. The forces that formed the Malaki blocks of Israel, the Parian marbles preferred by Phidias, the Carrara stones chosen by Michelangelo, formed also the marbles of Georgia.

All limestone, making up a portion of the earth's crust, has been made by the same chemical or organic agencies. These are still in operation, forming calcareous deposits. Loose heaps of shell on the sea bottom, the skeletons of animals, or substances held by the liquid elements and deposited in a solid state, were first laid down in horizontal strata.

If the existing conditions had not changed, these deposits might have continued to increase indefinitely, both in thickness and extent. The crust of the earth, however, was very unstable. It underwent, from time to time, great changes, which brought about corresponding changes in the nature of the deposits.

Clear seas, once teeming with innumerable lime-producing animals, were gradually changed into muddy seas, depositing clay, sand and gravel. These sediments, together with the calcareous beds, continued to be formed many times, alternately, until the deposits were many hundreds of feet thick.

Meanwhile, the earth, contracting from loss of heat, produced intense lateral pressure. These flat beds were slowly raised above the surface of the ocean. In many cases the pressure was so powerful as to warp them into gigantic folds overlapping one another. Sometimes these folds broke and relieved the tension by thrusting one edge of the series of strata far over the other.

The heat, pressure and chemical

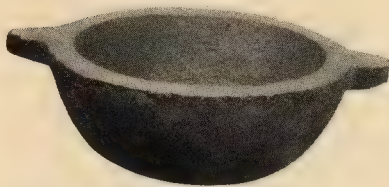


action changed the deposit into a compact mass. Once above the sea level, air and water began their work of erosion. Great periods of time had been consumed in the processes of formation; equally as long did these exposed ridges bear the assaults of the elements. The folds, forming high ridges and even mountains, were often cut away by these agents into valleys, while the valleys remained as ridges. The original natural features of this area were changed. The most fanciful flights of imagination could not reconstruct in the mind's eye the former topography of the land.

In the northwestern portion of Georgia is illustrated, perhaps as well as anywhere else in this country, this advanced stage of folding and erosion. Here the various contorted and folded strata of marble, sand, gravel and conglomerate now dip at a varying angle to the southeast. This direction is the same throughout, due to close-pressed overlapping folds, with their upper portions removed by erosion.

For ages this vast supply of marble has lain in the northwest corner of Georgia, trampled over by the feet of the earliest inhabitants of this section of the North American continent. No doubt they knew little of what lay beneath their feet, and cared less. It is possible that they were attracted by an occasional outcrop, and even probable that they fashioned from its glistening whiteness, a crude ornament or a cooking utensil. It is, in fact, a matter of record, that the Cherokees, the last of the Indian tribes to inhabit this region, made use of the marble in building the chimneys for their cabins, and in some instances cut out and used it for doorsteps. That they also worked it up into some decorative forms is known. At Colonel Stephen Tate's residence, near the

Georgia Marble Company's works, is a large circular marble bowl, of Indian construction, now used as a lawn vase. It is remarkably well preserved, and is highly prized by its present owner. There is also in use at this same residence several marble steps, which originally stood at the entrance to an Indian cabin in



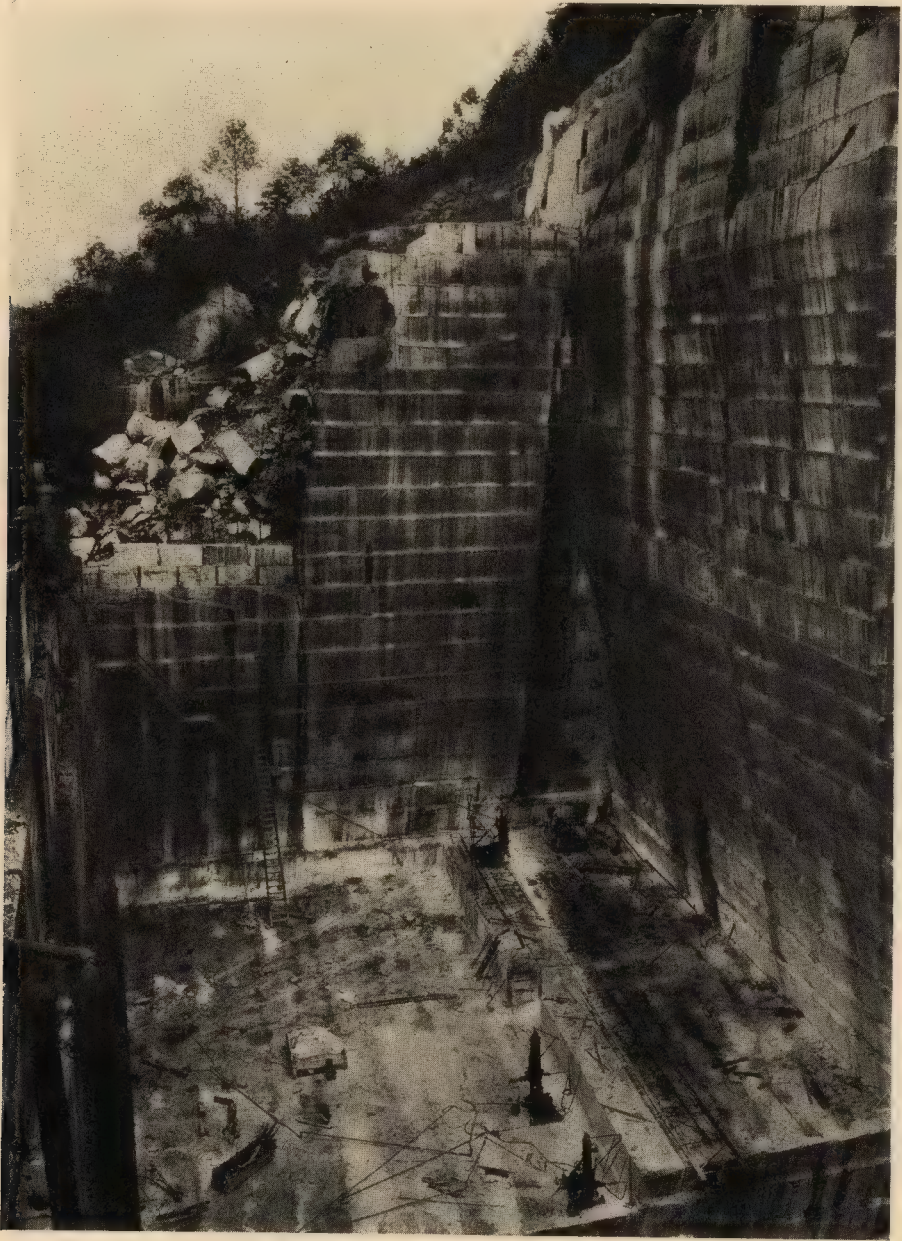
Marble bowl used by Indians for grinding corn. Owned for over 100 years by the Tate family, at Tate, Georgia.



The old Tate Homestead, from an old photograph. This structure has recently been torn down to make room for a more modern house. The Indian Bowl and marble steps mentioned were at this site.

the vicinity. They are known to have been in use for more than a hundred years; how much longer is merely conjecture. Although exposed under dripping eaves for this length of time they show no signs of disintegration and still retain, in remarkable perfection, the sharp edges and corners.

The discovery of the vast extent of the marble deposits of Georgia, the early workings of the quarries, and the development of an industry that today is one of the most important in the state, is a story of the deepest interest. When to that story is added the account of a community that is unlike any other in this country, a closely knit group of over 1,000 people bound together by common interests and happily employed in the same pursuits, the story becomes more than a narrative. It becomes a romance; a romance of industry.



The "New York," a white marble quarry
at Marble Hill, Georgia.



THE INDIANS' LEGACY

The Early History of Georgia Marbles

WHEN Pickens County was yet peopled by the Cherokee Indians, Sam Tate, in 1835, moved in and settled eight miles from the nearest white neighbor.

He acquired by purchase a tract of one hundred and sixty acres of land and, included in this tract, a road house on the Andrew Jackson Federal Road. The original owner of the property was no doubt a Cherokee, or part-Cherokee, Indian. Through his land ran a part of the finest marble deposit in the United States and one of the most valuable in the world. There is only one vein of Georgia marble and today one company controls it all, a solid block three-eighths of a mile wide, four miles long, and two hundred feet to half a mile deep, the estimated worth of which, according to experts, runs up to many billions of dollars. It has been worked now for more than fifty years and in all that time the surface of only a few acres of it has been scratched. From it has been taken marble for such buildings as the Sears Academy at Elgin, the Illinois Memorial at Vicksburg, the Cleveland Public Library, the Butler Art Institute at



Youngstown, the Federal Reserve Banks of Cleveland and Atlanta, the Field Museum in Chicago, the Post Offices at Savannah, New Orleans, Augusta and elsewhere, and thousands of other monuments and buildings.



A typical cabin by the shore of Long Swamp Creek near the "ford." From an old photograph taken about 1888.

With the discovery of Georgia marble and the development of the industry, the family name of Tate must always be pre-eminently and permanently associated. The first Colonel Sam Tate was a man of exceptional acumen, and was one of the first to foresee the tremendous value that lay hidden in this valley of solid marble. From the

day that the first grants were made by the government, after the exodus of the Indians, he was keenly alive to the potentialities of this valuable deposit of marble.

The early records show that in 1840 Terry Fitzsimmons began quarrying marble on a small scale in Longswamp Valley near Tate. This seems to have been the first systematic work done in developing the material. The marble worked is said to have been obtained from outcroppings and weathered boulders, and was often of a poor quality. All of the work was done by hand. The marble taken out was made up into tombstones, which were so costly that only the wealthy could buy, and consequently the trade was small. About 1842, Fitzsimmons erected the first mill in the country. It was on the east branch of Long Swamp Creek, near what is now Marble Hill Post Office, and contained one gang of saws. It was a crude and primitive affair, but the principle was the same as now used in the best mills.

Fitzsimmons and his partner Hurlick soon after built another mill

on the west branch of the same creek, about two miles east of Jasper, where a quarry had been opened. This mill was run intermittently for four or five years, but work was finally suspended. Mr. Fitzsimmons, who was later associated with a Mr. Margum, resumed operations on a more extensive scale at the original quarry, and during the succeeding two years erected a number of tombstones, which still stand throughout the surrounding country.

In 1850 the firm of Tate, Adkinson and Company opened a quarry in the vicinity of the Georgia Marble Company's present location. Two mills, consisting of two gangs of saws each, were erected by this company, one above and one below the quarry. Thus equipped, the plant was enabled to turn out a large number of tombstones. An agent was employed to travel through North Carolina and solicit orders. When a number of these stones sufficient to make a wagonload were sold, a six-mule team was started out to deliver them to the purchasers. This method of transportation added greatly to their cost, and a plain, common set of stones then brought from thirty to forty dollars. In 1852, Rankin, Summy and Hurlick succeeded this company, and were the last to do any work in that vicinity until the present Georgia Marble Company began operations.



Quaint footbridge over Long Swamp Creek, used until about 1890.
From an old photograph.



DEVELOPING THE INDIANS' LEGACY

The Later History of Georgia Marbles

IN 1884 a company of Northern capitalists was organized to work the Georgia marbles. This new company was capitalized at one million dollars and obtained long-time leases from Stephen C. Tate, son of the original Sam Tate. Later, the capital was increased to one and a half million dollars.

When operations were begun, the Georgia Marble Company had leased all the lands owned by the Tate estate, and had acquired by purchase an additional two thousand acres, which latter tract included the property on which the now valuable Kennesaw quarry is situated. The actual development of the industry was begun immediately following the organization of the company. The Cherokee Quarry No. 1 and the Creole Quarry No. 1 were opened in the order named. In many widely separated parts of the country this beautiful material was seen for the first time; in the floors of the Portland, Maine, depot and the cemeteries of New Orleans, and in the City Hall, Los Angeles. The first carload of marble shipped was sent to Atlanta and was used in the new Kimball House.

The Georgia Marble Company's operations were confined exclusively to the quarrying and sawing of marble. As the demand was for finished material, other companies doing this work were organized, one at Tate, another about three miles from the quarries, where a village sprang up named Nelson, and a third one at Marietta, about

forty miles away. These plants were independent of the quarries and of each other, and yet they were solely dependent upon the Georgia Marble Company for their raw material.

Later, two other quarrying companies came into being, the Southern Marble Company, at Marble Hill, three miles north of Tate, and the Amicalola Marble Company a mile or two further on.

Unfortunately, however, the financial returns to the Company were less than anticipated. The crystalline formation of the Georgia marble, unlike that of any other marble produced in this country (though this was to prove a real advantage),

was at first a sales resistant that only time could overcome. Discouraged by the outlook, the Company sold out in 1905 to the present Colonel Sam Tate, son of Stephen C. Tate, who thus acquired a controlling interest in this industry.

Realizing the desirability of having one company produce and manufacture its own product, in 1915 was begun the consolidation of the different marble properties and plants to bring them under one management. At this time the Southern Marble Company was purchased and a little later the Amicalola Marble Company. In 1917 the several finishing plants of the vicinity were acquired, thus bringing into one complete unit all the various units of production and manufacture, so that now the Georgia Marble Company takes the marble from the quarries, manufactures and transports it and places it in the structure.



Kennesaw Quarry, showing the earliest method of quarrying with diamond drills instead of channeling machine Photograph taken about 1890.

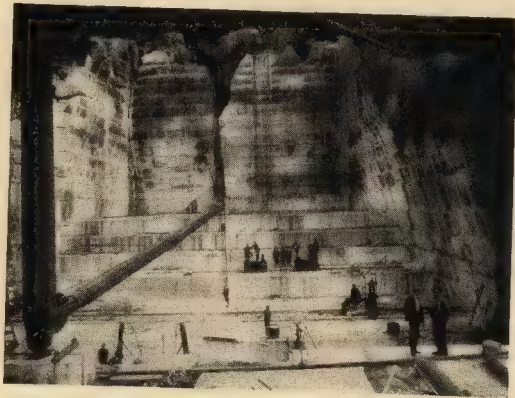


THE STONES OF THE VALLEY

IN the valley which extends for some two miles and a half, with a breadth of some three-eighths of a mile, lying among the "red old hills of Georgia," is located a mineral wealth that can hardly be estimated in dollars and cents. Nor can its future relation to the building interests of the nation, or even of the world, be properly realized, since the marble that forms this remarkable deposit runs no one knows how many feet deep into the bowels of the earth. In some places drill holes have been put down to a depth of 185 feet, and have failed to reach the bottom of the mass. Many estimate the depth of the bed as a half-mile; it may be deeper.

Today this vast supply of Georgia marble is only touched. Stand on any bluff overlooking Long Swamp Valley, near Tate, and the half-dozen enormous quarries appear only as rabbit holes in the field; yet each of these quarries would hold a large office building.

The material produced from these quarries differs considerably in color and, even to some extent, in texture.



The "New York" Quarry, from an old photograph taken in 1905.



In the Etowah quarries of this wonderful stratum, frozen to an adamant strength since the days when this world was young, are all those delicate shades of pink which only nature knows how to use in painting the glories of the departing day.

Endless are the differing shades and tones of pink that here struggle with each other for the supremacy until this marble bed is deep with the occurring and recurring colors. Varied as are these constantly changing shades of pink, the veins or markings are even more complicated and complex, if such a thing is possible. It is as if some mammoth spider web, sparkling with the morning dew and lighted by an early sun, had suddenly become petrified and in its varied splendors been held in this solid crystalline mass for all time.

In the Cherokee quarry these endless shades of pink are gone, and there appears an equal variety of light and dark grays. This Cherokee marble fairly runs riot in its many grays, from that colorless tint which suggests the rolling mist of a rainy day to such solid grays as are seen in the fading shades of the close of day.

Side by side with this Cherokee gray, so subtly suggestive of the pass-



View of white quarry with partial storage of blocks in the foreground.

ing of time, lies the rich dark blue marble of the Creole quarry.

But perhaps more beautiful even than the sunset pink of the Etowah quarry, the twilight grays of the Cherokee or the marine and June blues of the Creole, is the matchless white stone in the Kennesaw quarry of the Georgia Marble Company. Certainly it is this point which marks the full richness of this prehistoric gift. Millions of sparkling crystals in this white marble catch the gleam of the sunlight on their many faces only to throw back and reflect a thousand new glories with the sparkle and brilliancy of flashing gems.

While there is a bewildering display of these flaming sparkling whites, it is difficult to believe that such active, dominant and cheerful lights can live in solid marble. The myriads of crystals are responsible



Bird's-eye view of white quarries and Long Swamp Valley at Marble Hill, Georgia.



A Creole quarry worked to a depth of 175 feet. Each floor averages 4 feet 6 inches in depth, and the average block is about 150 cubic feet. The marble is clouded, from light and medium to dark. Single blocks as large as 100,000 pounds have been taken out.

for this, and so remarkable is their influence that they seem to give an actual glow to the marble. Nature seems to have squandered with a lavish hand such unequalled colors and unparalleled qualities as are not readily found elsewhere.

There are, too, many of the more restful and quiet whites to be found among these Kennesaw marbles, such whites as live in the lazy clouds of a late afternoon as, drifting dreamily, they go sailing by. Indeed these Georgia marbles seem actually to attain the impossible and it is very easy to understand how, now that their many special virtues are so widely recognized and appreciated, that there are not many structures erected of marble in which this Georgia product is not used to a greater or less degree, both on account of its surpassing beauty and its superior strength and durability.



Removing overburden from the top of a marble quarry with a powerful hydraulic gun.



A MODERN UTOPIA

THE community of marble workers in this corner of Georgia dwell in a happy valley between the hills of a Northern Georgia county. The men work in ideal surroundings for something more than a living wage; the families are housed in comfortable homes with acres for a garden, pigs, poultry and cows. The children have good schools and playgrounds; churches thrive without bickerings; jails are unknown, and crime rarely occurs. These conditions are the result of a regime that began in 1905 when Colonel Sam Tate took over the Georgia Marble Company from the Northern capitalists who had leased the lands from his father. There is a startling comparison between the conditions that prevail here, and the sad plight of the artisans who labored in building the Temple of Solomon—one of the finest instances in recorded history of marble working methods. The beaten, half-starved serfs of Israel were forced to drag the heavy stones from the royal quarries near the Damascus gate, flayed by their proud overlords at every step, solely for the aggrandizement of the King and the glory of the Court. The worker at Tate, or at Nelson or at Marietta is his own master, within proper limits. He has access at any time to the "Colonel,"



The High School
at Nelson.



The Gymnasium
at Tate.

The Nelson
Community Hall





The Tate Baseball Team, semi-pro champions of the State of Georgia.

who knows every one of them intimately, and calls their babies by their first names.

The people do not even lock their doors. A family can go away for days at a time and return to find their possessions untouched. Discontentment among the workers is unknown. Strikes or labor troubles are not even thought of in this valley.

Every child under eighteen years of age must go to school; and the Georgia Marble Company supplies the schools and employs the teachers. Every school has its playground and its auditorium. In addition, each of the three communities has its social center, its community building and gymnasium. Swimming pools are now being built, and a baseball team that can defeat most any other nine in Georgia is the pride of the marble workers.

Mostly native labor is used in the plants, and no one under eighteen can get on the payroll. There are nine quarries and five big finishing plants and all told over 1,000 men are employed. The Company owns over 10,000 acres of land and in all this area there is practically no drinking. Profanity is rare, too.

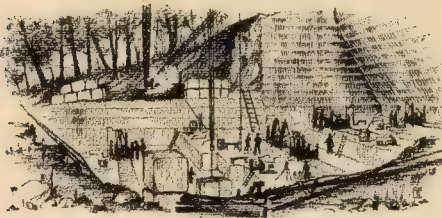
It is difficult to comprehend, in this day of strenuous labor strifes, the air of peacefulness and contentment that prevails throughout this industrial community.



QUARRYING GEORGIA MARBLES

IN the early days this Georgia marble, as we have shown, was taken from the hillsides in the most primitive manner, and only the surface material was used. The work required in getting out the blocks and cutting them for tombstones was executed by hand. These stones, loaded on ox-carts, were hauled to market over miles of rough and steep roads through mountainous country and were sold and shipped then to many distant points for the making of tombstones and monuments. Many of them stand today as examples of the durability of this remarkable material. So perfectly have they stood the wear and tear of rains and biting winds, blistering suns and freezing snows, that they still retain the full measure of their original beauty and strength.

Today this primitive hand labor has been replaced with modern methods. The present plant is equipped with nearly every facility known to the trade for the quarrying of the stone, together with many new devices that can be found only in these quarries. This marble, in



its natural bed, is a massive unit of solid and compact material. It cannot be wrested from its bed in one operation; nor can it be blasted out with powder or dynamite, for such a process would shatter it to such

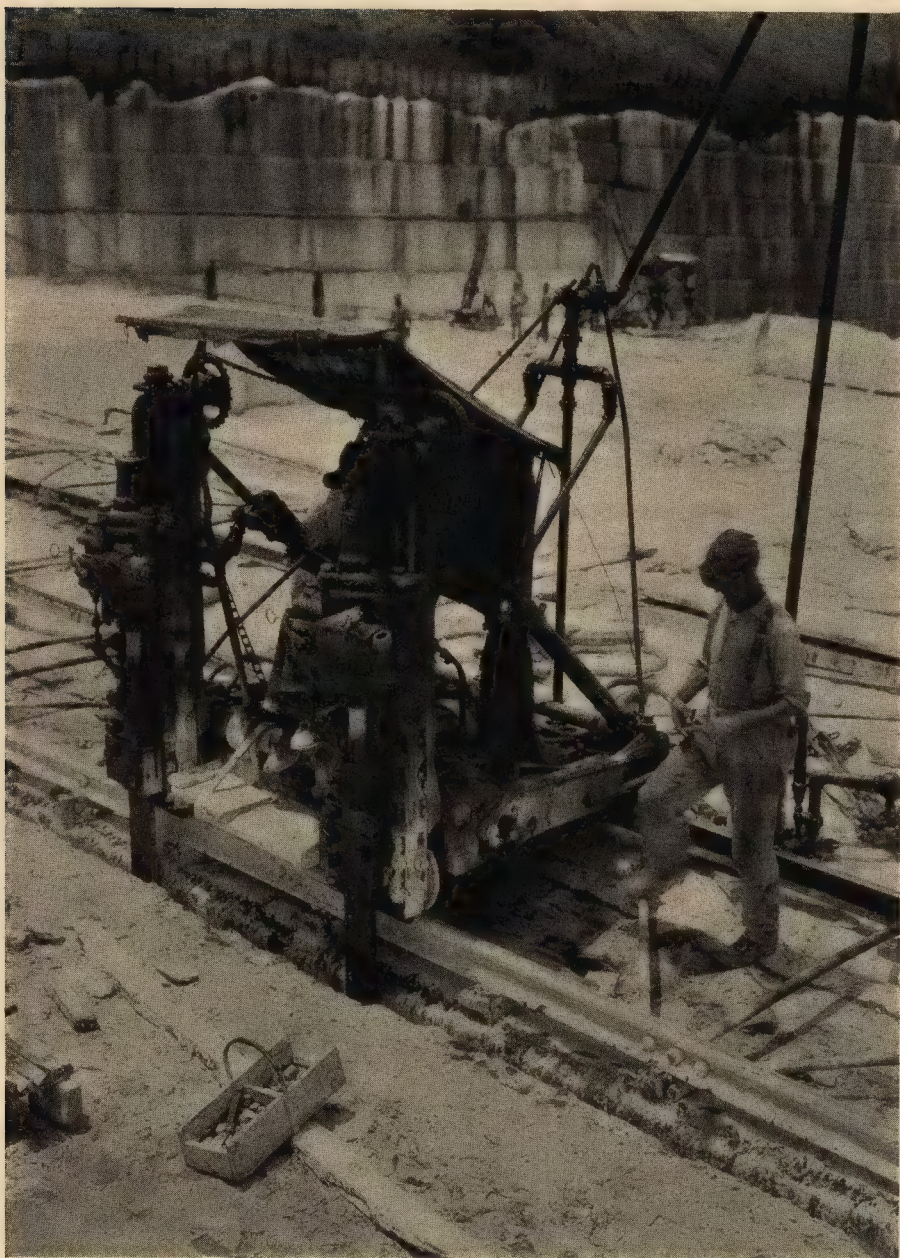
an extent as to make the procuring of large blocks practically impossible.

The quarrying of this Georgia marble is most interesting. Many processes are required to change it from its natural, crude state into a turned, fluted, polished and beautiful column as the support of a great building. These quarries, or great holes in the earth, vary in size and depth. In some, many installments of ladders lead down and down to the white, marble floor at the bottom where all is noise and activity. The din and roar that issues from the quarry mouth suggests that a hard-fought battle is going on below, with the constant and continuous explosions of rifles, rapid-fire guns and light artillery. Closer inspection shows that an actual battle is being waged, but in place of the rifles there are air and steam drills and channelers, for the artillery and fighting soldiers wear overalls and jumpers covered with marble dust, the uniform of this great army of peace.

The double channeling machines operate two long arm-like devices at one end of which are five blades or knives of tempered steel. Run by air or steam power, these two arm-like projections operate up and down, causing the blades or knives to strike continuously upon the



"New York" quarry, from a photograph taken in 1904.



Channeling machine cutting marble out of the quarry.
It runs along tracks and cuts at the same time.

surface of the marble. In this manner, these striking blades chip away at the surface until they dig a crack or crevice in the floor of the quarry. As these machines move back and forth across the breadth of the quarry or up and down its length, in time long, narrow slits are made, giving the floor the appearance of a monster checker board.

In the actual quarrying of the marble, first a keyblock is cut out. Series of holes are bored by means of these air and steam drills that make their way into the solid marble for a depth of four feet or more in a very few minutes, water being used with both the drills and the channeling machines to lessen the heat of friction. When a sufficient number of these holes have been bored in the solid marble, wedges are used to break the block from its bed.

One after another blocks are cut out on the same level, working towards the wall of the quarry. Another opening is then made in the floor where work will begin on the next level. The quarries go down to great depths, as the marble is cut from each floor, four to five feet lower than the preceding floor.



Method of raising block in quarry, preparatory to hoisting.



MOVING THE BLOCKS

THE big blocks that are pried loose must now be moved either to the waiting railroad cars for shipment or to the finishing mills. Many miles of track connect the different quarries of the Georgia Marble Company with each other and with the main line of the Louisville and Nashville Railroad system. All through the busy day, large locomotives draw the heavy loaded cars and start these shipments of Georgia marble toward their distant destinations. Some idea of the power of these locomotives may be gained from the fact that they have to move at one time many cars fully loaded with blocks of marble that run as high as fifty tons to the block. Only the most massive of modern machinery makes possible the handling of these huge blocks of marble. In fact, everything on and about this great plant is on such a colossal scale that the casual spectator is made keenly aware of his own littleness, and begins to view the operations with a new sense of proportion.



And while these locomotives are screeching and puffing about on their many errands, gigantic steam and electric cranes, silently, save now and then with a creak of remonstrance at the weight imposed upon



A derrick 90 feet high, capable of lifting blocks up to fifty tons, shown hoisting a small block out of the quarry.

them, quietly swing their heavy burdens at the direction of their engineers. Alongside each of these quarries rises one of these huge cranes. A day in these marble workings is certain to make a deep and lasting impression on the spectator, and remind him both of the awful power of the source of all things and the might of modern machinery.

Then, too, there are the tremendous traveling cranes that pick up these mammoth blocks of marble and hurry them along to the big mills where the restless gang-saws are constantly working, day and night, to cut them into shapes and sizes such as will meet the requirements of innumerable blue prints and specifications in the drafting-room. All is action on this big marble reservation and only perfect system makes possible the harmony that everywhere exists and the hearty co-operation of every department.



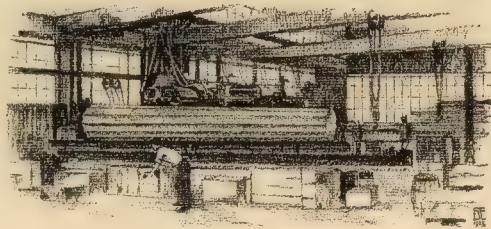
An electric traveling crane used for handling marble blocks after they have come from the quarry.



FINISHING GEORGIA MARBLES

THE finishing mills are surrounded by acres of marble deposited by the huge traveling cranes. Some of the blocks weigh several tons, just as they were taken from the quarry. There is so much marble here in various sizes and shapes, that you imagine a country of snow-covered hills and valleys in which the perpetual verdant foliage, red soil and Georgia sunlight play havoc in phenomenal contrast.

The finishing mills are equipped with many saws for cutting the blocks into smaller ones, or into slabs for wainscoting, flooring, etc. There are many kinds of these saws, circular, reciprocating and others, but the saws chiefly used consist of a collection of some twenty long blades of mild steel, set from half an inch to many inches apart, the thickness of the sawed slabs or blocks being regulated by the adjustment of these saws. These saws are pushed back and forth by power, the steel bands rubbing on the surface of the marble. These bands or saws have no teeth, but there is constantly poured on the surface of the block from above a mixture of sand and water. In this way the sand is run back and forth across the wet surface of the stone and by constant rubbing, wears its way completely through the block. Once set and started in operation, these gang-saws continue



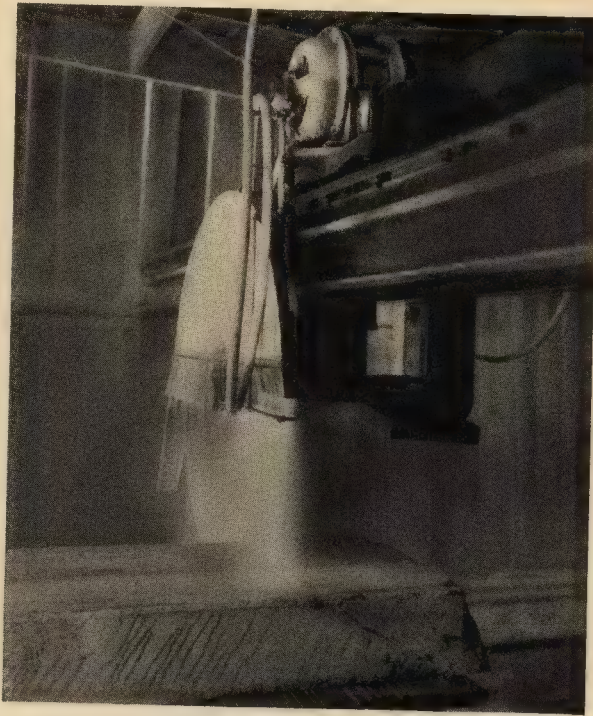


The quarry blocks are put in a gang saw, containing rows of stout steel blades, and cut into slabs of varying thickness. These saws cut about 2 inches per hour.

without stopping until the cut is completed, the cutting process continuing day and night. The rate of cutting varies from a half-inch to two inches an hour.

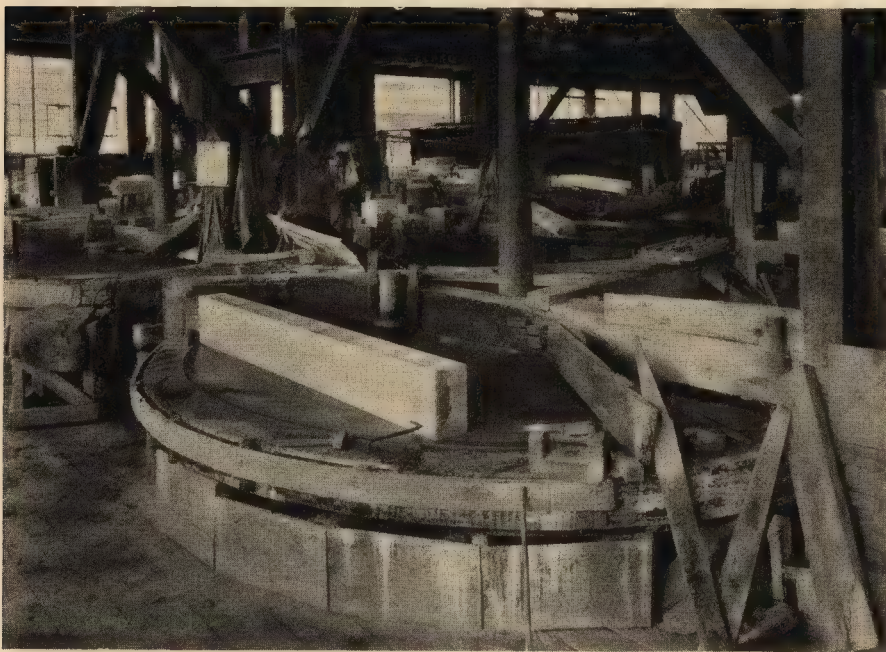
All machinery constructed for the roughing out of marble is on a massive scale. In addition to the gang-saws there are tremendous turning lathes. Fifteen and twenty-ton blocks of marble are hoisted to these lathes by the big cranes and they are then turned in the same way that wood is turned. It is remarkable how rapidly the big blocks are turned and roughened into circular forms for columns, one man being able to accomplish this preliminary work in a day or two, after which the roughened column is sent on to the finishing mills for the smoothing, rubbing, polishing, fluting, etc.

The finishing processes and the chiseling and turning of the big



The diamond saw, so called because each tooth of the circular blade is set with a diamond. Used for special, quick cutting

blocks into the most beautiful mouldings, cornices and completed designs of every kind are of equal interest. Modern inventions have done away with some of the slow, old-fashioned methods and the very finest of work can now be done in a much shorter time by means of the machinery and implements such as are found in these big plants. Here are many more of the toothless gang-saws, turning lathes, large and small, carborundum machines, polishing lathes and rubbing beds. These rubbing beds consist of rapidly revolving steel discs, twelve or fourteen feet in diameter. Water and sand or crushed steel are poured on these discs and with the resultant abrasive action the surfaces of the marble blocks are worn to exact size and ready for polishing. One of the most interesting of the smaller implements is the busy little pneumatic tool. By means of the rapidly moving chisels and tools, the rough stone is chiselled and chipped away by the artisan to meet the requirements of the particular design in hand in an almost incredibly short time.



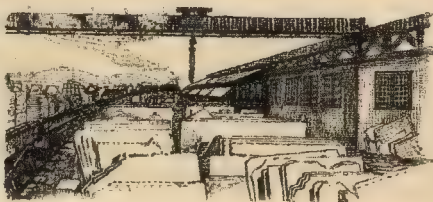
Rubbing bed, used for smoothing up marble after it comes from the saws.



SHIPPING GEORGIA MARBLES

EVERY day thousands of cubic feet of Georgia marble leave the yards of the marble company. Some of it is destined for foreign points. The blocks for the interior of a court house in Nebraska leave the plant in company with a block that will feel the touch of a famous sculptor's chisel in Chicago. The screen for a bank in Montreal leaves at the same time as an altar for a chapel in Pittsburgh, or the trimming for an office building in New England. Here is a carved pedestal for a fountain in Washington; there a pair of shafts that will adorn the façade of a new church in New Orleans. Every day more than a trainload of marble leaves the yards at Tate, to find its way into buildings all over the United States.

Naturally, since these shipments are destined, in their final delivery, to reach such many and widely separated centers of building activity throughout the United States and Canada, the routes diverge in most cases very shortly after the shipments leave the plant. But, no matter how short the journey, the marbles must be securely packed, propped or otherwise protected against possible injury while in transit. It is a frequent sight to see a flat car carrying a pair of huge blocks braced with heavy timbers; or perhaps even a single column as long as the car itself, wedged so tightly that it cannot move even on the roughest journey.





CHARACTERISTICS OF GEORGIA MARBLES

THE beauty of Georgia marble is at once appreciated by one unskilled in the building trades. But that alone would not make it the choice of artists and builders alike had it not possessed other and more utilitarian qualities.

It is, in fact, a material of wonderful strength. Besides, it is practically unaffected by weather and it is almost non-absorbent. Frequent tests made by the Ordnance Department of the Government disclose some rather startling facts which partly explain the growth in popularity of this beautiful stone. Six-inch cubes of marble withstood a total of over 434,000 pounds of pressure before they fractured pyramidentally. This meant a pressure of over 12,000 pounds to the square inch. Professor Ferris of the Engineering Department of the University of Tennessee also tested several specimens of the Georgia marbles and his results showed even greater strength. All the ordinary building stones crush at from 3,000 to 8,000 pounds of pressure per square inch. This means that a single column of this marble, 12 feet high and 2 feet in diameter would support the entire weight of a large building; and would continue to support it for hundreds of years, after many other materials had gone to decay.

It is possible to test very accurately the amount of moisture that the stone will absorb. Since absorption is the first step toward the disintegration of a stone, this test becomes as important as the tests for strength. It was found that these Georgia marbles were practically free from all pores or openings into which water or any other foreign

matter could penetrate. The actual figures showed the percentage of absorption in every case was less than .03 per cent. This seems to be due to the fact that the crystalline grains of the material are unusually uniform, and comparatively small. Since any substance that will absorb water will rapidly disintegrate and decay, it would seem that it is this quality of non-porousness that appeals strongly to the economically inclined builders.

Its chemical structure shows a very high percentage of carbonate of lime—something over 98 per cent—and this is significant as indicating a purity that is hardly equalled by the other marbles of the world.

That its beauty also appeals to the sculptor is evidenced by some of the comments made by members of that fraternity. Lorado Taft, for instance, upon being asked to express his opinion of Georgia marble, replied: "I should think that my constant use of it would convey the idea that it is my preference among American marbles."

Not many people know that there is in New York City a firm that makes a specialty of carving in marble the replicas of the models made by the most famous sculptors in the world. This New York firm has carved many of the famous marble statues in this country—and some of those abroad. They recently declared that in their more than thirty-five years of such practice they had never found a better working material, nor one of which the durability was so unquestionable. Such works as the Lincoln Statue, in the Memorial at Washington; the McKinley Statue at Niles, Ohio; the Columbus Memorial Fountain at Washington; Civic Virtue, in City Hall Park, New York; and the Piave War Memorial on Pincian Hill, Rome, Italy, are among their creations—and in all of them marble from the hills of Georgia was used.

Such buildings as the Corcoran Art Gallery, New York Stock Exchange addition, the Utah State Capitol, the Pan-American Building, the Rhode Island State Capitol, were built wholly or in part of this material, and these are only a few of the long list of structures of which it is a part. There is indeed hardly a city of any size in the country which has not used the marbles of Georgia to some extent in its buildings.

THE following pages evidence a few of the many and diversified treatments in which Georgia Marbles have been advantageously used. The group includes—

McKinley Memorial, at Niles, Ohio.
Larkin Residence, at Buffalo, N.Y.
Cleveland Art Museum, at Cleveland, Ohio.
Hurt Building, at Atlanta, Ga.
Trowbridge Residence, at Noroton, Conn.
Connor Residence, at Buffalo, N.Y.
Mausoleum, at Kansas City, Mo.
Corcoran Art Gallery, at Washington, D.C.
Public Library, at Cleveland, Ohio.
Emory University, at Atlanta, Ga.
Maine Monument, at Havana, Cuba.
"Pollyanna" Monument, at Boston, Mass.
Jewett Garden, at Pasadena, Cal.
Monroe County Savings Bank, at Rochester, N.Y.
Manufacturers' and Traders' National Bank, at Buffalo, N.Y.
Lincoln Statue, at Washington, D.C.
New York Stock Exchange, at New York, N.Y.
Clark Mausoleum, at Hollywood, Cal.
Field Museum, at Chicago, Ill.
"French" Fountain, at Washington, D.C.
Sears Academy, at Elgin, Ill.
Illinois Memorial, at Vicksburg, Miss.
Columbus Fountain, at Washington, D.C.
Pan-American Building, at Washington, D.C.
"Civic Virtue" Statue, at New York, N.Y.
Post Office, at Augusta, Ga.
Citizens and Southern National Bank, at Atlanta, Ga.
Rhind Statue, at New Haven, Conn.



The Court of Honor in the McKinley Memorial Building at Niles, Ohio. The peristyle of Doric columns encircles a statue of William McKinley, by J. Massey Rhind, the famous sculptor. In front of the statue is a marble pool, as in an old Pompeian atrium. The entire work is built of Georgia marble.



The façade of the William McKinley Memorial at Niles, Ohio. The larger columns, twenty-eight in number, are monoliths, each 25 feet high and 3 feet 4 inches in diameter. Georgia marble was the structural medium selected by the architects, McKim, Mead & White, of New York.



The Larkin Residence at Buffalo, New York. Ken-
nesaw Georgia marble was used for the columns and
trim. The architects were McCreary, Wood & Bradney,
of Buffalo, New York.



The Cleveland Art Museum, at Cleveland, Ohio, exemplifies a pure Ionic style. It was designed by Hubbell and Benes, and built out of Georgia marble from the Kennesaw quarry.



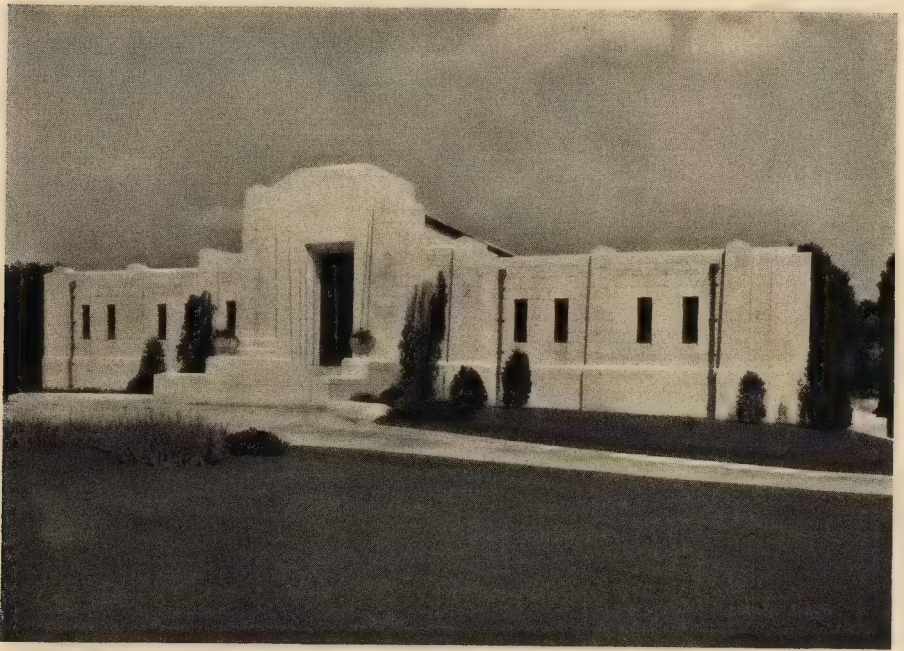
Entrance to the Hurt Building at Atlanta, Georgia. The graceful Corinthian columns, with the circular balustrade, strike a most unusual note in office building architecture. Georgia Mezzotint marble was the material used for this feature. J. E. R. Carpenter, of New York architect.



The Trowbridge Residence at Noroton, Connecticut.
Pink marble from the Etowah quarry at Tate, Georgia,
was used for the entire exterior. The architect was
Electus D. Litchfield and Rogers, New York.



The Connor Residence at Buffalo, New York. The rusticated surface of the blocks of Creole Georgia marble gives an effect of rich dignity not often achieved in domestic structures. The architects were McCreary, Wood & Bradney, Buffalo, New York.



The Mausoleum at Kansas City, Missouri, built in 1922 entirely out of Georgia Silver Gray marble, is an adaptation of the Egyptian style of architecture. The architect was Sidney Lovell, of Chicago.



The Neo-Grecian style of architecture of the Corcoran Art Gallery in Washington, D.C., is enhanced by the use of white Georgia marble on a basement of Milford Pink Granite. It was designed by Ernest Flagg and built in 1893.



The Public Library at Cleveland, Ohio, built in 1923-24, in the best Italian Renaissance style. The architects, Walker and Weeks, of Cleveland, developed the design in Light Cherokee marble.



One of the buildings at Emory University, at Atlanta, Georgia. Cherokee, Creole and Etowah marbles from Georgia were used in the exteriors of the Emory group. Henry Hornbostel, of Atlanta, Georgia, was the architect.



A colonial stairway in one of the Emory University Buildings. The stairway is of Cherokee marble, from Georgia. Henry Hornbostel, of Atlanta, Georgia, was the architect.



Monument erected in Havana by the Government of Cuba to the Sailors and Marines who lost their lives in the sinking of the *Maine*. Built in 1925 out of White Georgia marble. Felix Cabarrocas, of Havana, was the sculptor.



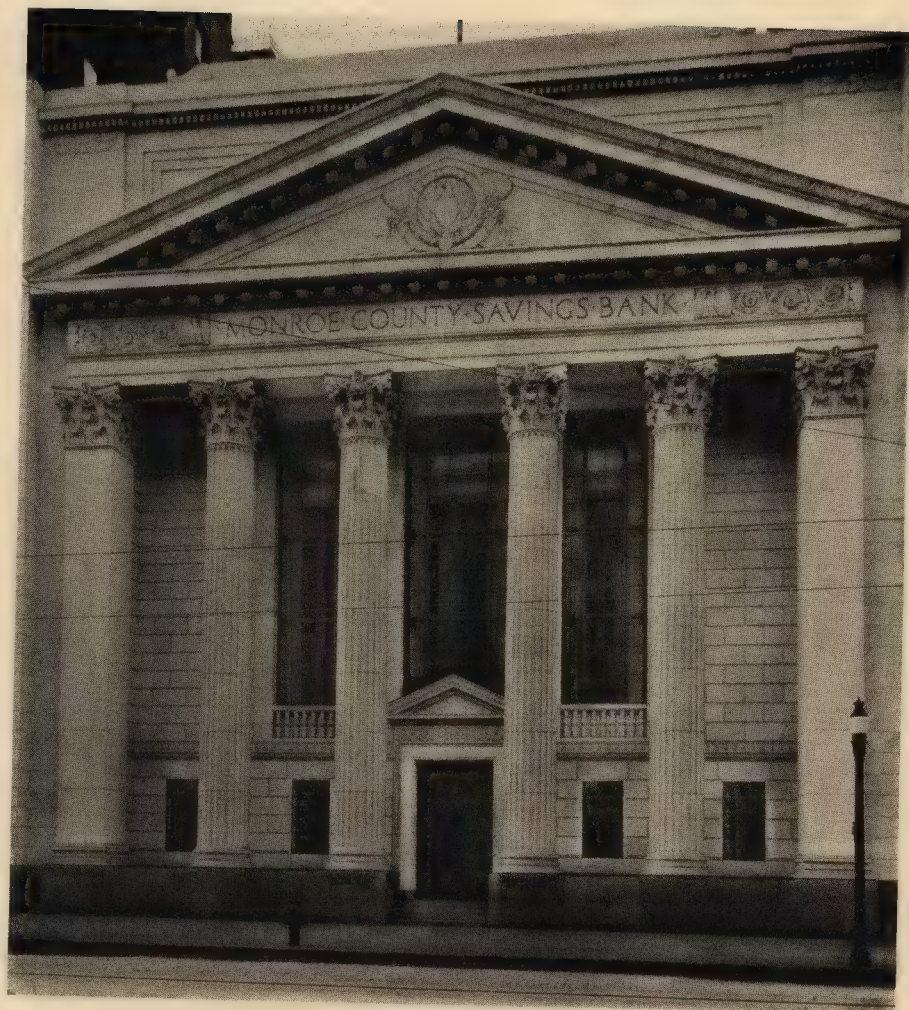
Monument erected in Boston, Massachusetts, to Mrs. Eleanor H. Porter, the author of "Pollyanna." This chaste Corinthian shaft was designed by McDonnell & Son, of Buffalo, New York, and built of Georgia Pink marble.



The Hurt Building, of Atlanta, Georgia, is one of the most prominent office buildings in the south. It was built in 1914 and Mezzotint Georgia marble was used for that portion of the building up to and including the third floor. The architect was Jas. E. R. Carpenter, of New York.



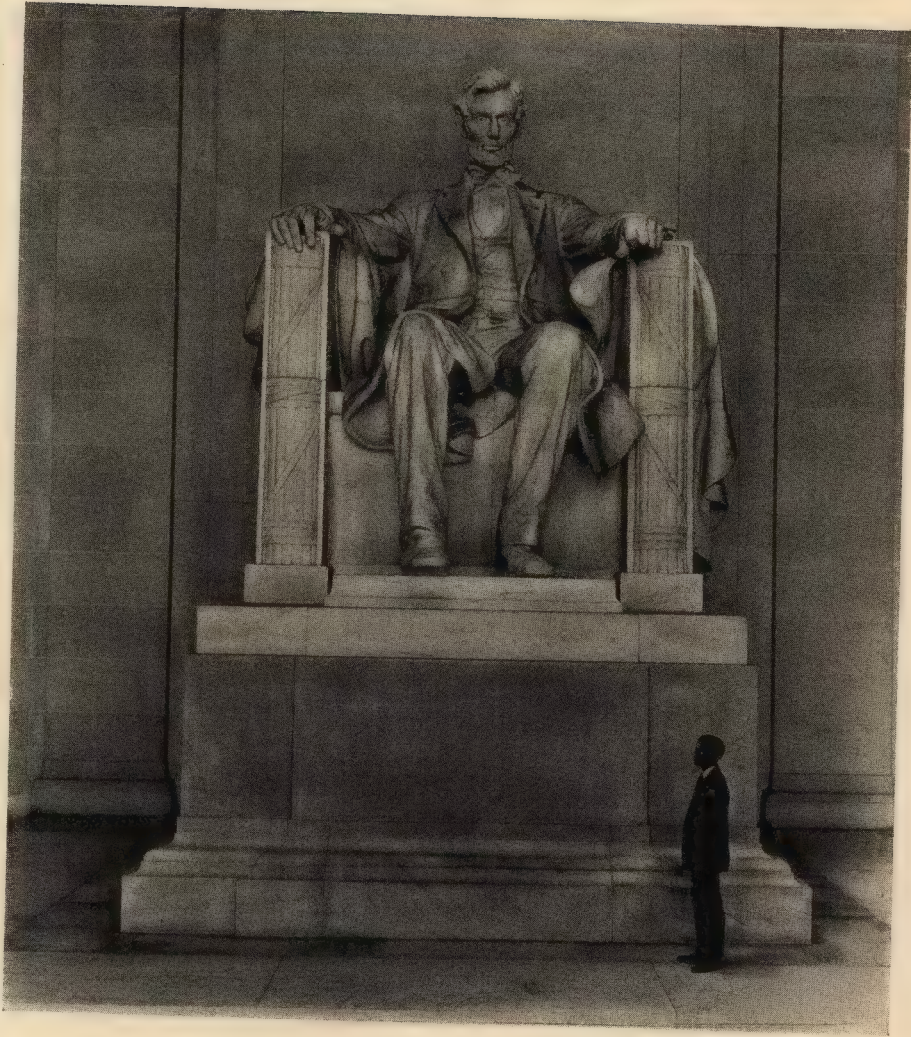
This attractive lawn decoration stands on the grounds around the home of W. K. Jewett at Pasadena, California. It is sculptured out of Cherokee Georgia marble from our own designs.



The preservation of architectural details is a characteristic of Georgia White marble, as evidenced by this Corinthian façade of the Monroe County Savings Bank, at Rochester, New York. It was built in 1925; Mowbray and Uffinger, of New York, were the architects.



The greater severity of the Ionic order, with its suggestion of Periclean refinements, is admirably expressed through the medium of Georgia Kennesaw marble in this Buffalo, New York, structure. The Manufacturers' and Traders' National Bank Building was erected in 1913 and the architects were Furness, Evans & Company, of Philadelphia, Pennsylvania.



The heroic statue of Lincoln, 20 feet high, in the Lincoln Memorial at Washington, D.C. It was made from twenty-eight blocks of Georgia marble, some of them weighing forty tons each. Henry Bacon, architect; Daniel Chester French, sculptor. Carving and erection by Piccirilli Brothers.



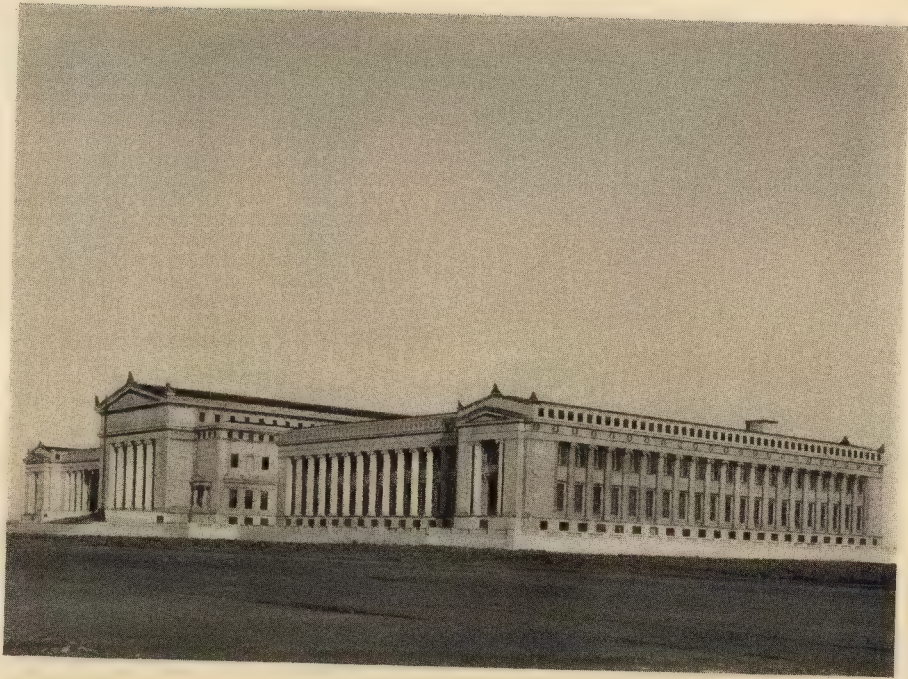
Both the original building for the New York Stock Exchange and the 23-story annex, were built of Georgia marble. Trowbridge and Livingston, New York, were the architects for the annex. The pediment sculpture in the old building was done by J. Q. A. Ward, and carved by Piccirilli Brothers.



When James Gamble Rogers, of New York, designed the Post Office Building at New Orleans, Louisiana, he was evidently influenced by the style of San Micheli. This Italian Renaissance exterior was built in 1910, of Georgia Cherokee marble; it stands today with its carvings and detail ornamentation as clean cut as when first erected.



This mausoleum for W. A. Clark Jr., in Hollywood Cemetery, California, is said to be one of the most beautiful and costly in America. The entire exterior, including the roof, is of White Georgia marble. All the columns are monolithic. The architect was Robert D. Farquhar; Sherry Fry did the sculpture in the front pediment, carved after erection.



The Chicago Field Museum of Natural History, the largest marble building in America, is 700 feet long, 350 feet wide and about 90 feet in height, with a terrace 60 feet wide extending entirely around the structure. This terrace has a retaining wall 6 feet above ground, with steps and balustrade, all of Georgia marble like the building proper. It was built in 1920, and Graham, Anderson, Probst & White, of Chicago, were the architects.



This fountain by Daniel Chester French, sculptor, and Henry Bacon, architect, stands in Dupont Circle, Washington. It was built in 1920 of White Georgia marble. The pedestal was cut from a single block 10 feet high, and the bowl from a block 13 feet in diameter. Carving and erection by Piccirilli Brothers, New York.



The Sears Academy, at Elgin, Illinois, was built in 1923 of white Georgia marble. Its chaste exterior is rendered doubly beautiful by the material employed. H. F. Rich, L. Guenzel and H. F. Robinson were the associated architects, all of Chicago.



The Illinois Memorial at Vicksburg, Mississippi, was erected in 1905 of White Georgia marble. It is imposingly situated on a hill with a long flight of marble steps leading to the entrance portico upheld by six huge Doric pillars. Jenney, Mundie & Jense were the architects.



The Columbus Memorial Fountain, in the plaza opposite the entrance to Union Station, Washington, D.C. Columbus is the figure standing in the center of the picture. The entire fountain was built of White Georgia marble, in 1912. Lorado Taft, of Chicago, was the sculptor.



One of the most interesting buildings in Washington is the Pan-American, known also as the "International Capitol." The exterior is of White Georgia marble, as are also the sculptured groups by Borglum and Konti, to either side of the main entrance. Within is a fountain of Pink Georgia marble by Mrs. Whitney, and in the Aztec garden in the rear is a balustrade of unique design of White Georgia. Albert Kelsey and Paul P. Cret, of Philadelphia, were the associated architects.



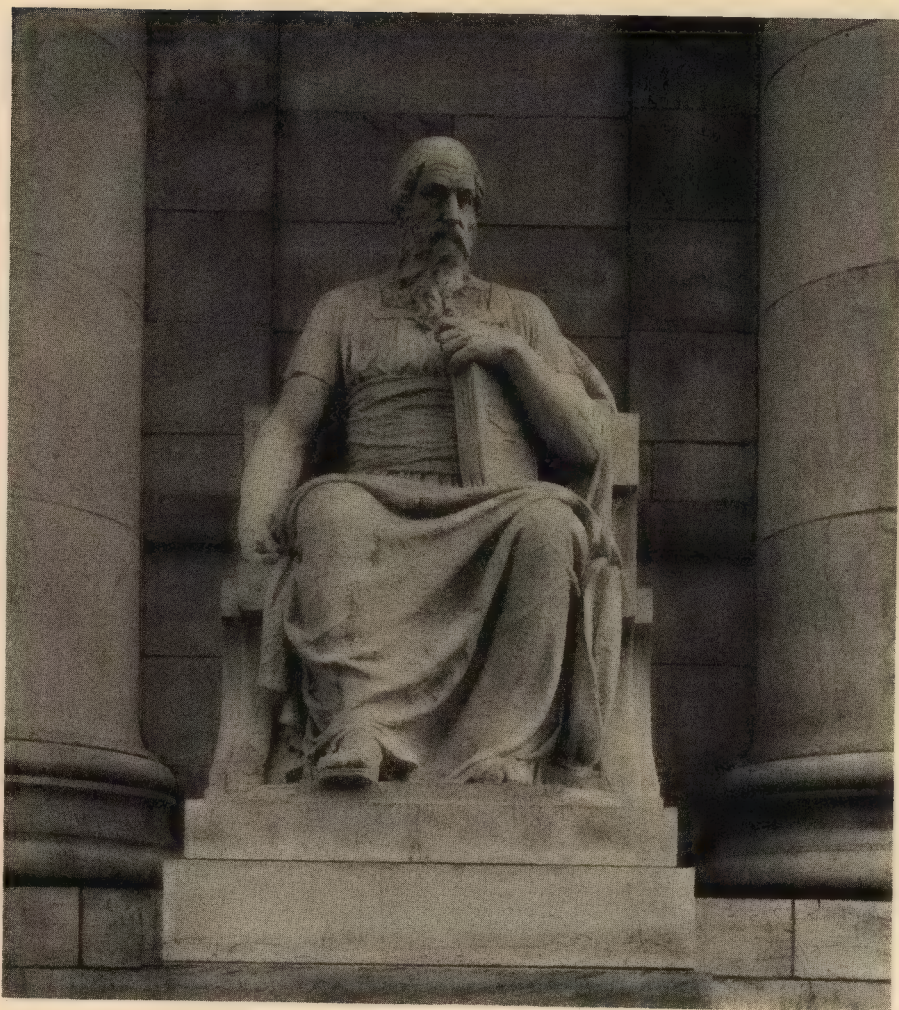
"Civic Virtue," Frederick MacMonnies' statue in New York that caused a country-wide discussion a few years ago. The figure, said to be the largest since Michelangelo's "David," was cut from a block of Georgia marble over eighty tons in weight. The architect was Thomas Hastings; Piccirilli Brothers did the carving.



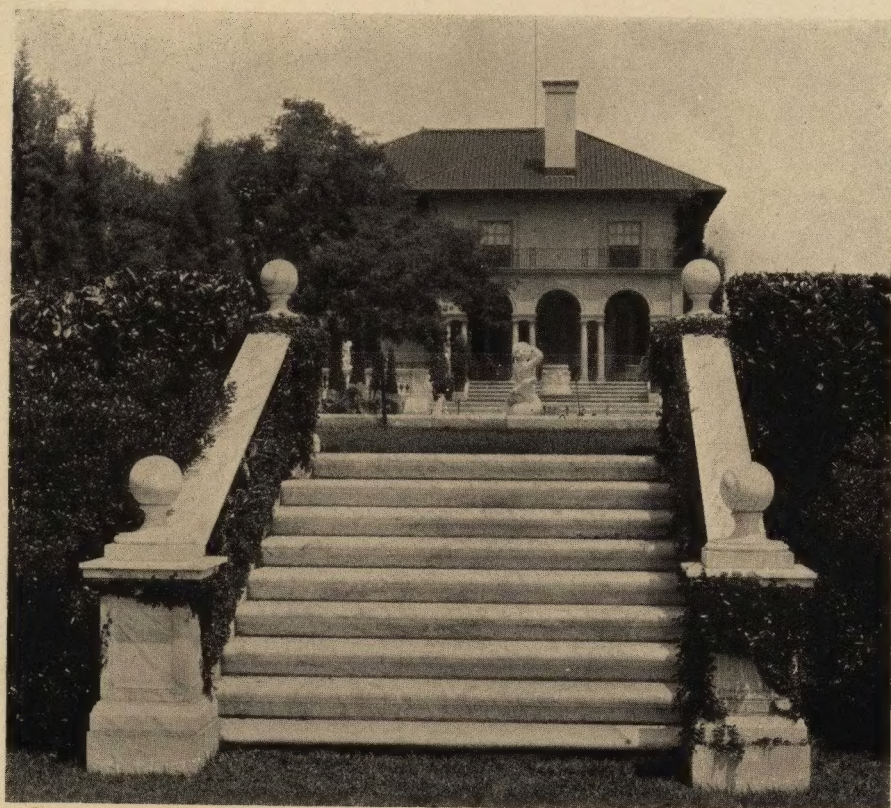
The Post Office at Augusta, Georgia, is an Americanized version of the Italian Renaissance. It was built in 1914 out of Cherokee Georgia marble. Oscar Wenderoth, of the Treasury Department, Washington, D.C., was the supervising architect.



The interior of the Citizens and Southern National Bank, of Atlanta, Georgia, makes an effective use, in the columns, pilasters, counters, floors and ornaments, of several kinds of Georgia marble. George E. Murphy was the architect.



One of several figures by J. Massey Rhind on the exterior of the New Haven Court House, at New Haven, Connecticut. These were all carved out of Georgia White marble. Allen and Williams were the architects.



Georgia Creole and Cherokee marbles were used for the steps, pedestals, fountain ornaments, etc., in this formal garden on the grounds of W. K. Jewett at Pasadena, California.

